Bristol® ControlWave® Micro
Integrated Enclosure Solutions

Designed and built for out-of- the-box installation and startup

For years, our panel shop has been setting the standard for quality design, assembly and testing of custom enclosures and cabinets. Now Emerson Process Management brings that experience to the Bristol® ControlWave® Micro to provide a plug-and-play installation solution.

Benefits

- Eliminates the need for in-house panel design and fabrication

- Design standardization minimizes cost

- Rely on the experience of professionals for cost effective packages designed for your specific applications

- Fabrication by UL 508 certified panel shop assures electrical code compliance

- Avoids delay in custom panel quoting

- Two-week delivery on most common configurations helps you to plan installation and startup sooner

- All components and options are tested together allowing trouble-free startup

- Standardizes the maintenance effort to reduce maintenance cost

- Emerson quality ensures long term reliability and lower cost of ownership over the product lifecycle

Ideal SCADA Solution

Emerson has been a pioneer of innovative SCADA solutions throughout the modern era of SCADA. Over these two decades we have gained the knowledge, experience and skill to engineer the affordable solutions you need.

The ControlWave Micro integrated enclosure solution is the ideal answer to your SCADA requirements for flexibility, quality and budget control.

Applications

The programmability of ControlWave and the flexibility of the integrated enclosure solution allows for a wide range of water & wastewater, oil & gas and energy distribution application.

- Pump and lift station RTU

- Gas measurement SCADA RTU

- Pressure Recorder (1 to 4 sensors)

- Water Quality Monitor when combined with the Six-Cense™ water quality sensor

- SCADA Security Monitor with event detection, entry/access control and video storage

Remote Automation Solutions

The ControlWave Micro enclosure assembly is a fully integrated unit that combines the PLC/RTU with a variety of options commonly required in SCADA applications. These include a NEMA 4X rated enclosure, power supply and battery backup options, termination options, display and operator input options, and wireless communication options. The enclosures also include several convenience and environmental suitability capabilities.

Features

- 4 package sizes for I/O and option flexibility

- Selection of NEMA 4 steel and NEMA 4X fiberglass or stainless steel to meet environmental requirements. (NEMA 3X with battery vent)

- 12 V and 24 V power supplies with battery backup options and input AC surge protection

- DIN rail mounted power distribution

- DIN rail mounted I/O terminal block options for convenient field wiring

- Optional convenience outlet, lamp and heater

- Multiple display and operator interface options may me mounted internally or externally

- Wide selection of fixed frequency and spread spectrum radios with polyphaser for electrical protection

- Built-in dial-line modem option for primary or backup communications

- Convenient Pressure Recorder configuration

Custom Control Panel Design and Fabrication

We recognize that there are times when one size does not fit all. The ControlWave Micro integrated enclosures allow some customization and still provide the benefits of standardization. However, when your enclosure or cabinet truly needs expert customization, our panel shop is prepared to meet your requirements. Whatever the size or shape, our Panel Fabrication Group designs and fabricates control panels based on your specific application. From a simple RTU field enclosure to a complete control room with large control console and monitoring stations. We design panels for controlled and harsh environments that include all NEMA rated enclosures and systems suitable for virtually all worldwide climates and conditions. Our panel shop is UL 508 certified and adheres to the latest codes and standards for assembly, testing, and quality control.

ControlWave Micro

ControlWave Micro is the most compact of the ControlWave family of high performance PLC/RTU hybrids. The controller is designed to exceed the stringent requirements for industrial control applications. With its very low power consumption of only 1.2W, and boasting a broad environmental specification, ControlWave Micro can be installed in the most remote and inhospitable locations for control and SCADA applications year in year out.

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Bristol® ControlWave® Micro Enclosures

Features

- High Speed processor

- Very low power consumption minimizes power supply, solar and battery backup requirements

- Worldwide standard IEC 61131-3 programming with ACCOL 3

- Multiple protocol support BSAP, Modbus, DNP3, DF1 & CIP

- Built-in 100 Mbps Ethernet port

- Up to eleven serial communication ports

- Built-in Modem and Radio options

- On-board Alarm & Historical database ensures highest data integrity

- Built-in FTP server

- Wide temperature range (-40 to +70ºC)
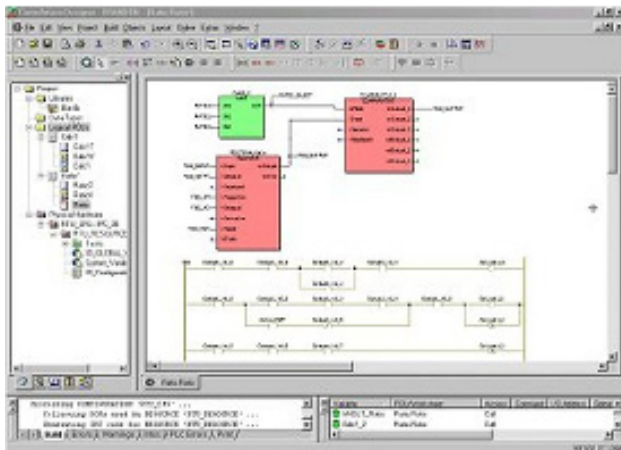
Industry Standard Programmability

Engineers will appreciate the ControlWave Designer with ACCOL III programming software. Its conformance to the IEC61131-3 programming standard enables them to quickly start projects, re-use existing code and simplify maintenance in the long term. All five IEC languages are supported, as well as multitasking of up to 100 simultaneous programs.

In addition to the basic functions and function blocks, ControlWave Designer brings the benefit of over twenty years of SCADA and plant control experience in Emerson's Bristol ACCOL III function block library. ACCOL III empowers the programmer with over sixty ready-to-use process control function blocks valuable for use in oil & gas, water & waste and process measurement & control applications. ControlWave also provides local historical data storage and alarming with time stamps to ensure the integrity of all data in the event of an interruption in network communication.

ControlWave has been designed around open standards to enable the engineer to employ familiar technologies to maximize system flexibility and expansion. With Emerson's Bristol OpenBSI (**O**pen **B**ristol **S**ystem **I**nterface) communications interface and Active X controls you can even build a local HMI or use the OPC Server to provide data to any OPC compliant PC based HMI.

ControlWave Micro conveniently combines the speed of a PLC, the programming power of a DCS, the low current consumption and flexible communications of an RTU. ControlWave Micro is truly the most versatile and cost effective SCADA and control system available.

Visit www.controlwave.com for model ordering information and enclosure drawings.

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